ENVIRONMENTAL ASSESSMENT

DOI-BLM-CO-040-2015-0016 EA

Construction of Six (6) Ponds on the Clough-Alber Allotment

Prepared by:

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BLM

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LOCATION. Garfield County, North of Rifle, CO.

LEGAL DESCRIPTIONS. T5S R94W Sections 7-8 (see attached map).

APPLICANT. Grazing Permittee.

PURPOSE AND NEED FOR ACTION. The mission of the BLM is "to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations". Land Health Standards and Guidelines for Livestock Grazing Management were developed between the BLM and the Colorado Resource Advisory Council to ensure that the mission of the BLM will be achieved.

The purpose of the action is to improve livestock distribution across the Clough-Alber Allotment providing relief to areas that are currently heavily utilized.

This environmental assessment is needed to determine whether or not to construct 6 new ponds/reservoirs on the Clough-Alber Allotment and if so under what terms and conditions to ensure that Public Land Health Standards and objectives for resource management are or will continue to be achieved.

SCOPING AND PUBLIC INVOLVEMENT AND ISSUES. The Colorado River Valley Field Office (CRVFO) NEPA Log lists NEPA documents that have been initiated. The NEPA Log allows the public to review and comment online on BLM NEPA and planning projects. This project was initiated in November 2014 and no public comments were received.

PROPOSED ACTION. The Proposed Action is to construct six (6) new ponds/reservoirs on the Clough-Alber Allotment and continue to maintain existing ponds in good and functioning condition. Each new pond would hold approximately 0.2 acre feet of water and would retain water from spring run-off from snow melt and summer storms. This action also involves removing an existing water trough and replacing it with a pond. The water trough is currently fed by a water catchment which will remain in place to feed water to the pond. Total new surface disturbance would be approximately 3 acres. Areas around the pond/reservoirs with surface disturbance will be reseeded with an approved native seed mix.

Maintenance activities will be limited to the existing footprint of the existing project. Maintenance of ponds typically occurs once or twice in a ten year period. Maintenance includes heavy equipment (ie. backhoe or bull dozer) being used to clean out sediment deposited into the pond, rebuilding the dam, or improving water bars in roads to direct water off the road and into the ponds.

NO ACTION ALTERNATIVE. No new ponds would be constructed on the Clough-Alber Allotment.

ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL. No other proposals for improving livestock distribution on the Clough-Alber Allotment were brought forward for analysis.

PLAN CONFORMANCE REVIEW. The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan. Glenwood Springs Resource Management Plan

Date Approved. Jan. 1984, revised 1988, amended in November 1991 - Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; and amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance; amended in September 2009; and amended in October 2012 - Approved Resource Management Plan Amendments/ Record of Decision (ROD) for Solar Energy Development in Six Southwestern States.

Decision Number/Page. The action is in conformance with Livestock Grazing Management (pg. 18).

Decision Language. "Construct facilities such as springs, reservoirs, fences, corrals, and livestock trails where necessary to control and distribute livestock."

RELATIONSHIP TO STATUTES, REGULATIONS, OTHER PLANS.

- Taylor Grazing Act of 1934 as amended;
- Federal Land Policy and Management Act of 1976;
- Public Rangelands Improvement Act of 1978;
- Title 43 of the Code of Federal Regulations Subpart 4100 – Grazing Administration;
- Noxious Weed Act of 1974;
- Endangered Species Act of 1973;
- National Environmental Policy Act of 1969;
- Migratory Bird Treaty Act of 1918;
- National Historic Preservation Act (16 USC 470f);
- Archeological Resources Protection Act;
- Native American Graves Protection and Repatriation Act;
- Indian Sacred Sites – EO 13007; and

- Consultation and Coordination with Indian Tribal Governments – EO 13175
- Colorado Public Health Standards and Livestock Grazing Management Guidelines - March 1997

STANDARDS FOR PUBLIC LAND HEALTH. In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands.

A land health assessment was conducted on the Roan Cliffs in 1999 and updated in 2013. The most recent assessment indicated that the condition of riparian areas was of concern and limiting livestock use in these areas would assist in the recovery of the streams. Increasing the availability of water on Cook Ridge would help to improve livestock distribution across the allotment and increase utilization of upland areas.

The impact analysis addresses whether the Proposed Action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for each of the five standards. These analyses are located in the program-specific analysis in this document.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES. This section provides a description of the human and natural environmental resources that could be affected by the Proposed Action and alternatives. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a Proposed Action and altemative(s) on certain environmental elements. Not all programs, resources or uses are present in the area, or if they are present, may not be affected by the Proposed Action and alternatives (Table 1). Only those elements that are present and potentially affected are described and brought forth for detailed analysis.

Table 1. Programs, Resources, and Uses (Including Supplemental Authorities).

Programs, Resources, and Uses	Potentially Affected?	
	Yes	No
Access and Transportation		X
Air Quality		X
Areas of Critical Environmental Concern		X
Cadastral Survey		X
Cultural Resources	X	
Native American Religious Concerns	X	

Environmental Justice		X
Farmlands, Prime or Unique		X
Fire/Fuels Management		X
Floodplains		X
Forests		X
Geology and Minerals		X
Law Enforcement		X
Livestock Grazing Management	X	
Noise		X
Paleontology	X	
Plants: Invasive, Non-native Species (Noxious Weeds)	X	
Plants: Sensitive, Threatened, or Endangered		X
Plants: Vegetation	X	
Realty Authorizations		X
Recreation		X
Social and/or Economics		X
Soils	X	
Visual Resources	X	
Wastes, Hazardous or Solid		X
Water Quality, Surface and Ground	X	
Water Rights		X
Wetlands and Riparian Zones	X	
Wild and Scenic Rivers		X
Wilderness/WSAs/Wilderness Characteristics		X
Wildlife: Aquatic / Fisheries	X	
Wildlife: Migratory Birds	X	
Wildlife: Sensitive, Threatened, and Endangered Species	X	
Wildlife: Terrestrial	X	

CULTURAL RESOURCES

AFFECTED ENVIRONMENT.

A records search of the general project area, and a Class III inventory of the Area of Potential Effect (APE), as defined in the National Historic Preservation Act (NHPA), was completed by certified contractors and the CRVFO BLM archaeologist and crew (CRVFO CRIR# 380, 786, 1047, 8396-1a&b and 1014-25). The project inventory and evaluation is in compliance with the NHPA, the Colorado State Protocol Agreement, and other federal law, regulation, policy, and guidelines regarding cultural resources.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. No cultural resources were documented during inventory and there are no previously documented sites within the project areas. Therefore, no cultural resources will be affected by project implementation. The Proposed Action has a determination of *no historic properties affected.*

Additional areas or changes in the project implementation may require additional archaeological inspection by a qualified archaeologist. These changes include but are not limited to extension of the pipeline, additional water features, or rerouting the pipeline outside of the surveyed area.

Mitigation.

Even though the project area was surveyed, ground disturbing activities have the potential to impact undiscovered, buried cultural resources through direct soil disturbance by machinery or indirect soil disturbance through vegetation removal and livestock tramping and concentrating. In order to protect cultural resources uncovered during operations the following conditions of approval are proposed as mitigation.

Cultural Resources. If subsurface cultural values are uncovered during operations, all work in the vicinity of the resource will cease and the authorized officer with the BLM notified immediately. The operator shall take any additional measures requested by the BLM to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within 48 hours of the discovery, the State Historic Preservation Officer (SHPO) and consulting parties will be notified of the discovery and consultation will begin to determine an appropriate mitigation measure. BLM in cooperation with the operator will ensure that the discovery is protected from further disturbance until mitigation is completed. Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer.

Native American Human Remains. Pursuant to 43 CFR 10.4(g), the holder must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on federal land. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery that could adversely affect the discovery. The holder shall make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the authorized officer, or until the authorized officer has issued a written notice to proceed, whichever occurs first.

No Action Alternative. By not approving the Proposed Action, any unintentional impact from surface disturbing activities to undiscovered, buried cultural resources would be generally lessened. There would still be potential for some soil disturbance from continued use of the existing stock ponds through livestock concentration.

NATIVE AMERICAN RELIGIOUS CONCERNS

AFFECTED ENVIRONMENT.

American Indian religious concerns are legislatively considered under several acts and Executive Orders, namely the American Indian Religious Freedom Act of 1978 (PL 95-341), the Native American Graves Environmental Assessment Protection and Repatriation Act of 1990 (PL 101-601), and Executive Order 13007 (1996; Indian Sacred Sites). In summary, these require, in concert with other provisions such as those found in the NHPA and ARPA, that the federal government carefully and proactively take into consideration traditional and religious Native American culture and life and ensure, to the degree possible, that access to sacred sites, the treatment of human remains, the possession of sacred items, the conduct of traditional religious practices, and the preservation of important cultural properties are considered and not unduly infringed upon. In some cases, these concerns are directly related to "historic properties" and "archaeological resources". In some cases elements of the landscape without archaeological or other human material remains may be involved. Identification of these concerns is normally completed during the land use planning efforts, reference to existing studies, or via direct consultation.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. The Ute have a generalized concept of spiritual significance that is not easily transferred to Euro-American models or definitions. As such the BLM recognizes that the Ute have identified sites that are of concern because of their association with Ute occupation of the area as part of their traditional lands. No traditional cultural properties, unique natural resources, or properties of a type previously identified as being of interest to local tribes, were identified during the cultural resources inventory of the project area. Overall consultation was conducted for this allotment during the Grazing Permit Renewal process on March 7, 2013 and no comments were received at that time. No additional Native American Indian consultation was conducted for the proposed project.

No Action Alternative. Under this alternative, the stock ponds would not be constructed. Therefore, there would be no potential to impact areas of concern to Native Americans.

PALEONTOLOGICAL RESOURCES

AFFECTED ENVIRONMENT.

The BLM is unaware of any paleontological resources in the area. No surveys have been completed.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Even though there are no known paleontological resources in the area, ground disturbing activities have the potential to impact undiscovered, buried paleontological

resources through direct soil disturbance by machinery or through soil erosion from vegetation removal. In order to protect paleontological resources uncovered during operations the following condition of approval is proposed.

Mitigation.

Ground disturbing activities have the potential to impact undiscovered, buried paleontological resources. In order to protect paleontological resources uncovered during operations the following condition of approval is proposed as mitigation.

Paleontological. Any paleontological resource (historic or prehistoric site or object) discovered by the operator, or any person working on their behalf, on public or Federal land shall be immediately reported to the authorized officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant scientific values.

No Action Alternative. By not approving the Proposed Action, any unintentional impact to undiscovered buried paleontological resources would be negated.

LIVESTOCK GRAZING MANAGEMENT

AFFECTED ENVIRONMENT.

The Clough-Alber Allotment consists of 5,323 acres of BLM land along with 643 acres of private land. The allotment is currently permitted for sheep use in the spring and fall as outlined in the table below.

Table 2. Livestock Type & Number.

Livestock Type & Number	Period of Use	AUMs
1000 Sheep	5/16 – 7/6	274
1000 Sheep	5/16 – 7/5	268
1000 Sheep	9/25 – 11/15	274
1000 Sheep	9/25 – 11/15	274
Total		1090

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Livestock grazing distribution would be improved under the Proposed Action. Currently livestock use is limited on the top of Cook Ridge. Constructing the new ponds would help better distribute use across the allotment.

No Action Alternative. Livestock grazing distribution would not be improved. Livestock would continue to concentrate use on areas where water is currently available. Water hauling to

temporary water troughs would continue in areas where roads are in sufficient condition to haul water on.

PLANTS: INVASIVE NON-NATIVE SPECIES (NOXIOUS WEEDS)

AFFECTED ENVIRONMENT.

A landscape-wide weed inventory has not been completed on the Clough-Alber Allotment. However, monitoring and other inventories have shown that several species of noxious weeds and invasive non-native species occur within the area of the Proposed Action. Table 3 lists noxious weed species known to occur in the allotment.

Table 3. Noxious Weeds Infestation Known to Occur in Area of the Proposed Action.

Scientific Name	Common Name	Statewide List Type
Cirsium arvense	Canada thistle	B List
Cynoglossum officinale L.	Houndstongue	B List
Verbascum Thapsus L.	Common mullein	C List
Arctium minus Bernh.	Common burdock	C List

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Weeds generally germinate and become established in areas of surface disturbing activities. Constructing two new ponds would temporarily provide a niche for weed establishment. Livestock grazing can contribute to the establishment and expansion of noxious weeds through various mechanisms. In addition, noxious weed seed can be transported and introduced to new areas by fecal deposition or by seed that clings to the animal's coat. The following mitigation would help alleviate weed establishment and transportation on the allotment.

Mitigation.

To reduce the opportunities for weeds to become established and to reduce the opportunities for offsite sediment transport, the disturbed areas will be reseeded with a certified weed-seed free mixture of native grasses adapted to the site. The permittee will monitor the disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B within the area disturbed from construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying. The operator is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

No Action Alternative. Not constructing the new ponds and maintaining roads would not change the existing condition on the ground and would have no additional impacts to weeds.

PLANTS: SENSITIVE, THREATENED AND ENDANGERED

AFFECTED ENVIRONMENT.

Federally-listed, proposed or candidate plants that the U. S. Fish and Wildlife Service indicates may be present in the action area (USFWS 2015) and BLM sensitive plants with occupied or potential habitat in the action area (BLM 2009) are shown in Table 4. The table also summarizes their habitat descriptions and potential for occurrence in the Proposed Action area based on known geographic range and habitats present.

Table 4. Threatened, Endangered, and Sensitive Plant Species potentially present in the Project Area.

Federally Listed, Proposed or Candidate Plant Species		
Species	**Habitat**	**Potential For Occurrence**
Parachute penstemon (*Penstemon debilis*)	Listed as threatened. Endemic to steep, talus slopes on the southern escarpment of the Roan Plateau in Garfield County, Colorado. The plants are found only on the oil-shale rich Parachute Creek Member of the Green River Formation between 8,000 to 9,000 feet in elevation or on eroded shale in wash bottoms.	**Yes:** The Green River Shale Formation is exposed along Trapper and Northwater Creeks in the Clough-Alber Allotment.
Ute ladies'-tresses (*Spiranthes diluvialis*)	Listed as threatened. Habitat for this threatened species is found below 7,200 feet along streams, lakes or in wetland areas with seasonally saturated or subirrigated soils.	No: The Clough-Alber Allotment is above the upper elevational range of this species and the project would not involve any riparian areas.
BLM Sensitive Plant Species		
Species	**Habitat**	**Potential For Occurrence**
Cathedral Bluffs meadowrue (*Thalictrum heliophilum*)	Known from 18 occurrences in Garfield, Mesa and Rio Blanco Counties. The meadowrue is a narrowly endemic plant found in dry, shale barren communities between 6,200 and 8,800 feet in elevation.	**Yes:** Some dry, sunny, shale barrens are present along Northwater & Trapper Creeks in the Clough-Alber Allotment.
Piceance bladderpod (*Lesquerella parviflora*)	A Colorado endemic known only in Garfield, Mesa, and Rio Blanco Counties. It occurs on shale outcrops of the Green River Formation, on ledges and slopes of canyons in open areas at elevations ranging from 6,200 to 8,600 feet.	**Yes:** The Green River Shale Formation is exposed along Trapper and Northwater Creeks in the Clough-Alber Allotment.
Roan Cliffs blazing star (*Mentzelia rhizomata*)	Found only on steep talus slopes of the Green River Formation in Garfield County. The species occurs on eroding oil shale at elevations from 5,800 to 9,000 feet. In the GSFO, the Roan Cliffs blazing star is known to occur on the cliffs of the Roan Plateau, along Parachute Creek drainage and in Main Elk Creek, near New Castle, Colorado.	**Yes:** The Green River Shale Formation is exposed along Trapper and Northwater Creeks in the Clough-Alber Allotment.

Harrington's penstemon (*Penstemon harringtonii*)	Open sagebrush communities on rocky loam or rocky clay loam soils, usually of basaltic or calcareous origin. Between the elevations of 6,200 to 10,000 feet.	**No:** Soils in the project area are not of basaltic or calcareous origin and no Harrington's penstemon have ever been documented in the allotment.

Table 5 lists the plant communities that are rare either globally or within Colorado that have been documented within the vicinity of the action area.

Table 5. Significant Plant Communities Potentially Present in the Project Area.

Significant Plant Communities		
Community Name	***Habitat Description and Occurrence***	***Global and State Rank***
Hanging garden sullivantia (*Sullivantia hapemanii* var. *purpusii*)	A Colorado endemic plant found in seeps in Green River Shale Formation. On steep canyon walls of East Fork Parachute Creek and lower Northwater Creek along the boundaries of the East Fork Common allotment. This is considered a significant plant community because the Roan Plateau supports nearly 62% of the global population of this species.	G3T3/S3
Indian ricegrass shale barrens (*Achnatherum hymenoides*)	Occurs on sparsely vegetated, south-facing talus slopes of Green River Formation. Along lower Northwater Creek in the Clough-Alber Allotment.	G2/S2
Mountain Big Sagebrush/Great Basin wildrye (*Artemisia tridentata* ssp. *vaseyana/Festuca thurberi*)	Occurs on mesic subalpine slopes. Found in a tributary of Northwater Creek in the Clough-Alber Allotment.	G3G4/S1S2

No special status plants species have been documented within the immediate vicinity of the action area. Extensive botanical surveys have been conducted on the Roan Plateau; therefore the potential for finding special status plants in the area is considered low. Three significant plant communities occur within the Clough-Alber Allotment.

ENVIRONMENTAL CONSEQUENCES.

All Alternatives. Special Status Plants. Although some potential habitat for threatened, endangered and BLM sensitive plants is present adjacent to the project area, there are no exposures of the Green River shale within 0.25 miles of the proposed pond sites and no potential habitat would be disturbed. The Proposed Action and no action alternatives would have "No Effect" on any listed plant species and would have no impact on any BLM sensitive plant species.

Proposed Action. Significant Plant Communities. The hanging gardens and Indian rice grass shale barrens are found in seeps and on steep slopes along lower Northwater Creek. The mountain big sage/Thurber fescue community is found on private lands south of the project area adjacent to Northwater Creek. Construction of the 6 ponds would have no direct impacts on these significant plant communities. Developing upland water sources may draw livestock away from Northwater Creek and on to Cook Ridge. The Proposed Action may have some benefit for

significant plant communities by reducing the grazing pressure adjacent to the creek where these communities occur.

No Action Alternative. Under the No Action Alternative, the proposed ponds would not be constructed. There would be no surface disturbance and no direct impacts on significant plant communities. Sheep would have to water at Northwater Creek which may have some impact on the Indian ricegrass shale barrens or the mountain big sage/Thurber fescue sites which occur adjacent to the creek. Sheep grazing or trailing through the sites may cause some loss of vegetation along trails and a slight increase in the risk of weed invasion in the significant plant communities.

Analysis of Public Land Health Standard 4 for Threatened, Endangered, and Sensitive Plant Species.

Due to the lack of any suitable habitat or known occurrences of federally listed or BLM sensitive plants within the vicinity of the project area, Standard 4 for threatened, endangered, and BLM sensitive plants would not be affected.

PLANTS: VEGETATION

Affected Environment.

The 6 proposed ponds would be constructed along Cook Ridge in the Clough-Alber Allotment. The allotment is located several miles northeast of Rifle, Colorado on the Roan Plateau. Elevations at the project site range from approximately 8,300 to 8,750 feet. Vegetation in the project area is comprised predominantly of yellow rabbitbrush (*Chrysothamnus viscidiflorus*), common snowberry (*Symphoricarpos rotundifolius*), and mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*) with lesser amounts of Saskatoon serviceberry (*Amelanchier alnifolia*) and bitterbrush (*Purshia tridentata*). Herbaceous vegetation at the sites is dominated by Columbia needlegrass (*Acnatherum nelsonii*), Letterman's needlegrass (*Acnatherum lettermanii*), mountain brome (*Bromus marginatus*) and smooth brome (*Bromus inermis*).

Ecological site inventory data collected in 2011 and 2012 demonstrate that upland vegetation tends toward late seral plant communities with high shrub densities and canopy cover, and reduced cover and production of grasses and forbs relative to the Ecological Site Descriptions. Field observations and data collected during the Roan Cliffs Land Health Assessment in 2013 found that the ridgetops and side slopes had few signs of livestock use. Conversely, upland terraces adjacent to Northwater Creek have received heavy grazing use in the past and have more bare ground and less vegetative cover than expected. Vegetation on these upland terraces is dominated by weeds and other early seral plant species such as houndstongue, Canada thistle, coneflower, wooly mullein, and Kentucky bluegrass which is not meeting management objectives.

Environmental Consequences.

Proposed Action. Construction of the 6 new ponds would result in the loss of approximately 3 acres of mesic mountain shrubland vegetation. Disturbed areas adjacent to the ponds would be seeded with an appropriate native seed mix to help restore the native vegetation community and reduce the potential for weed invasion. The disturbed areas would be monitored for weeds and weeds encountered would be promptly controlled. Native vegetation should become re-established within 2-3 growing seasons.

Implementation of the Proposed Action would provide additional water sources along the top of Cook Ridge so that sheep could spend more time in the uplands and less time watering at Northwater or Trapper Creeks. Livestock grazing distribution would be improved and the riparian zone and upland terraces adjacent to Northwater Creek would receive less grazing use. Mesic mountain shrublands adjacent to the new ponds would receive some additional grazing and browsing pressure which may result in some thinning of the shrub canopy and allow additional herbaceous growth.

No Action Alternative. Under this alternative, no new ponds would be constructed and there would be no direct impacts to vegetation. Livestock grazing would continue to be focused around existing water sources, including Northwater Creek. The mesic mountain shrublands along Cook Ridge would receive little grazing use and shrub densities may continue to increase with a corresponding decrease in herbaceous cover and productivity. Upland terraces adjacent to Northwater Creek may continue to receive disproportionate use and vegetation may remain in early seral status.

Analysis of Public Land Health Standard 3 for Healthy Plant Communities.

The Proposed Action falls within the Roan Cliffs landscape which was most recently assessed as part of the Roan Cliffs Abbreviated Land Health Assessment Unit in 2013 (BLM 2014). The assessment found that most of the uplands were meeting Standard 3, but upland terraces immediately adjacent to streams and riparian areas had more bare ground than expected with more weeds and fewer native perennial grasses and forbs. Implementation of the Proposed Action should improve livestock distribution across the allotment which would result in less use of the terraces adjacent to the creeks and more use of the upland ridgetops. The Proposed Action should maintain or improve vegetative conditions throughout the allotment and gradually move towards achieving Standard 3 for healthy plant communities.

SOILS

Affected Environment.

A review of the soil survey by the NRCS for the *Rifle Area, Colorado, Parts of Garfield and Mesa Counties* indicate two soil map units occur within the proposed project area (NRCS 1985). The NRCS soil map unit descriptions are provided below (NRCS 2015):

Northwater loam (48) – This deep, well-drained soil is found on mountainsides at elevations ranging from 7,600 to 8,400 feet and on slopes of 15 to 65 percent. The Northwater loam is derived from sedimentary rocks. Surface runoff for this soil is slow and the erosion hazard is slight.

Parachute-Rhone loams (53) – These gently sloping to steep soils are found on ridges and mountainsides at elevations ranging from 7,600 to 8,600 feet and on slopes of 5 to 30 percent. The Parachute soil is derived from sandstone and or marlstone while the Rhone soil is derived from fine-grained sandstone. Approximately 55 percent of this unit consists of the Parachute soil while approximately 30 percent is the Rhone soil. The Parachute soil is moderately deep, well drained, and has a moderate erosion hazard with medium surface runoff. The Rhone soil is deep, well drained, and has a slight erosion hazard with slow surface runoff.

Soil health was evaluated in 1999 and briefly again in 2013 during the Roan Cliffs Land Health Assessments. BLM staff concluded that soils were generally meeting land health standards throughout the project area, with slight to moderate departures from expected conditions (BLM 1999, 2014).

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Excavation of six new stock ponds will result in direct soil surface compaction and removal of ground cover in and adjacent to the pond construction sites. However, soil impacts will be limited in the overall extent of new ground disturbance to approximately 3 acres total. Providing new stock watering sources may improve livestock dispersal across the allotment and in the long-term may indirectly benefit soils by reducing livestock concentration around the currently limited watering sources and heavily utilized areas.

No Action Alternative. Under this alternative, no new ponds would be built and there would be no direct impacts to soils during the construction process. However, if the ponds are not constructed, there may continue to be heavy livestock use of nearby perennial streams and springs as watering sources, which may result in surface compaction and removal of vegetative cover that increases the likelihood of erosion and soil loss.

ANALYSIS OF PUBLIC LAND HEALTH STANDARD 1 FOR SOILS.

Based on the Roan Cliffs Land Health Assessment, BLM staff concluded that soils are meeting Standard 1 with some problem areas (BLM 1999, 2014). Implementation of the Proposed Action is not anticipated to degrade soil health from current conditions.

WATER QUALITY, SURFACE AND GROUND

AFFECTED ENVIRONMENT.

The proposed pond construction would occur along the ridge between Trapper Creek and Northwater Creek, which are tributary to the East Middle Fork Parachute Creek 6th level

watershed. Several unnamed ephemeral drainages occur across the project area, but typically only flow in response to snowmelt or thunderstorm events and likely do not reach Northwater Creek before flow goes subsurface. There are a few perennial springs in proximity to the proposed ponds, some of which have been developed for livestock watering.

The State of Colorado has developed *Stream Classifications and Water Quality Standards* that identify beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters (CDPHE 2013b). Northwater and the unnamed tributaries in the project area are listed under the Lower Colorado River Basin and have water use classifications described below.

Table 6. Stream Segment Description.

Stream Segment Description	Classifications	Numeric Standards*
8. Mainstem of Northwater and Trapper Creeks, including all tributaries and wetlands, from their sources to the confluence with the East Middle Fork of Parachute Creek. East Middle Fork of Parachute Creek, including all tributaries and wetlands, from the source to the confluence with the Middle Fork of Parachute Creek.	Aq Life Cold 1 Recreation N Water Supply Agriculture Outstanding Waters	T = TVS(CS-I) °C D.O.= 6.0 mg/l D.O.(sp) = 7.0 mg/l pH = 6.5-9.0 *E.coli* = 630/100ml

Aquatic life cold 1 indicates that a stream segment is capable of sustaining a wide variety of cold water biota. Recreation N refers to stream segments with surface waters that are not suitable or intended to become suitable for primary contact recreation uses. Water supply and agriculture refer to stream segments that are suitable or intended to become suitable for potable water supplies and suitable for irrigation or livestock use. Effective September 30, 2013, the Colorado Water Quality Control Commission designated the Lower Colorado River Basin segment 8 as "Outstanding Waters", which affords such water bodies anti-degradation protections (CDPHE 2013a). This effort was in part to protect Colorado River cutthroat trout in Northwater and Trapper Creeks. The Commission found these segments to be critical spawning sites and considers the protection of this species to be important to the public at large.

The State of Colorado has developed a *303(d) List of Impaired Waters* and *Monitoring and Evaluation List* (CDPHE 2012) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone. No streams in the proposed project area are on this list suggesting water quality standards are currently being met, despite some past exceedances of chronic lead standards in Trapper Creek. Additional monitoring and evaluation by the Colorado Dept. of Public Health and Environment is necessary to determine the status of these water quality exceedances, potential sources of pollutants, and any implications to the outstanding waters designation in stream segment 8. Based on the 2013 Roan Cliffs Land Health Assessment, BLM staff determined water quality is meeting Standard 5 with some problems (BLM 2014).

Environmental Consequences.

Proposed Action. The newly constructed ponds will capture surface runoff from snow melt and thunderstorm events and store approximately 0.2 acre feet of water per pond. Due to the limited scope and size of the project, it is expected that water quality overall may have negligible impacts. Water stored in the ponds typically has reduced water quality due to higher water temperatures and lower dissolved oxygen among other changes in water chemistry. However, if the ponds support better livestock distribution and reduce direct usage of livestock on perennial streams and springs, there may be an overall long-term benefit to water quality in the watershed.

No Action Alternative. Under this alternative, no new ponds would be constructed and there would be no direct impacts to water quality from the construction and storage of runoff. However, if the ponds are not constructed, there may continue to be heavy livestock use of nearby perennial waterbodies, which are susceptible to water quality impacts through inputs of fecal coliform and sediment.

Analysis of Public Land Health Standard 5 for Water Quality.

Based on the Roan Cliffs Land Health Assessments, BLM staff concluded that water quality is meeting Standard 5 with some problems (BLM 1999, 2014). Implementation of the Proposed Action is not anticipated to degrade water quality from current conditions.

WETLANDS AND RIPARIAN ZONES

Affected Environment.

A wetland or riparian zone is the interface between land and a river, stream, lake or other water body. Wetlands and riparian areas refer to the vegetation that is associated with a body of water and is dependent on the existence of perennial, intermittent, or ephemeral surface or subsurface water. The lotic wetlands and riparian zones on the Clough-Alber Allotment were most recently assessed for functioning condition in 2013. The Proper Functioning Condition (PFC) assessment evaluates most of the indicators listed for riparian systems as described in the Colorado Standards for Public Land Health. The results of the PFC assessment for the Clough-Alber streams is shown in Table 7.

Table 7. PFC Assessment for Riparian Systems in the Clough-Alber Allotment.

Riparian Area Name	Miles	Condition Rating
Corehole Creek	0.6	PFC
Northwater Creek (lower reach)	3.2	PFC
Northwater Creek (middle reach)	0.5	Functioning-at-risk, with No Apparent Trend (FAR-NA)
Raspberry Creek (lower reach)	0.5	PFC
Raspberry Creek (middle & upper reach)	1.6	Functioning-at-risk with an Upward Trend (FAR-Up)
Tichner Draw (lower reach)	0.9	PFC

Yellowjacket Creek (lower reach)	0.5	PFC
Yellowjacket Creek (lower reach)	0.8	Functioning-at-Risk, With Upward Trend (FAR-Up)

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. The proposed ponds would be constructed along Cook Ridge in mesic mountain shrub vegetation. No riparian vegetation would be lost as a result of the Proposed Action. Developing upland water sources may draw livestock away from Northwater and Trapper Creeks and on to Cook Ridge. The Proposed Action may provide some benefit for riparian zones by reducing the grazing pressure adjacent to the creeks. The condition of the riparian areas would continue to improve and would eventually become dominated by late-seral riparian communities.

No Action Alternative. Under the No Action Alternative, the proposed ponds would not be constructed. Livestock grazing would continue to be focused around existing water sources, including Northwater and Trapper Creeks. The riparian zones and upland terraces adjacent to the creeks would receive a disproportionate amount of use and the vegetation would likely remain in an early-mid seral state which does not meet the management objectives in the Clough-Alber Allotment Management Plan. Some soil compaction and bank damage along the creeks may occur which would increase the risk of noxious weed invasion.

ANALYSIS OF THE PUBLIC LAND HEALTH STANDARD 2 FOR RIPARIAN SYSTEMS.

The Roan Cliffs Land Health Assessment (BLM 2014) concluded that all riparian areas within the Clough-Alber Allotment were either achieving or moving towards achieving Standard 2 for riparian systems except the middle reach of Northwater Creek. Implementation of the Proposed Action should improve livestock distribution within the allotment which should result in less use of Northwater Creek and other riparian areas. The Proposed Action should improve riparian vegetative and soil conditions and move towards achieving or exceeding Standard 2 for healthy riparian areas.

AQUATIC WILDLIFE: INCLUDING SPECIAL STATUS AQUATIC WILDLIFE

AFFECTED ENVIRONMENT.

Table 8 summarizes Federally listed aquatic wildlife species potentially occurring in Garfield County (USFWS 2015), additional endangered Colorado River fish, and BLM sensitive aquatic species (BLM 2009) that may occur in the project vicinity.

Table 8. Special Status Aquatic Wildlife Species Summary.

Federally Listed, Proposed or Candidate Aquatic Wildlife Species		
Species and Status	**Habitat/Range**	**Occurrence/ Potentially Impacted**

Green lineage cutthroat trout *(Oncorhynchus clarki stomias)* Threatened	The greenback cutthroat trout is the subspecies of cutthroat trout native to the Platte River drainage on the Eastern Slope of Colorado. The USFWS is advising federal agencies to consider green lineage cutthroat trout on the Western Slope of CO as threatened until such time as review and interpretation of recent genetics and meristic research has been completed.	Absent/No
Bonytail *(Gila elegans)* Endangered	This large chub is a member of the minnow family found in large, fast-flowing waterways of the Colorado River system. Their current distribution and habitat status are largely unknown due to its rapid decline prior to research into its natural history. The bonytail is extremely rare in Colorado and no self-sustaining population exists. Only one has been captured in the state since 1980.	Absent /No
Colorado pikeminnow *(Ptychocheilus lucius)* Endangered	Primarily exists in the Green River below the confluence with the Yampa River, the lower Duchesne River in Utah, the Yampa River below Craig, Colorado, the White River from Taylor Draw Dam near Rangely downstream to the confluence with the Green River, the Gunnison River in Colorado, and the Colorado River from Palisade, Colorado, downstream to Lake Powell. Colorado pikeminnow populations in the upper Colorado River basin are now relatively stable or growing. Designated Critical Habitat includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
Humpback chub *(Gila cypha)* Endangered	Found in deep, clear to turbid waters of large rivers and reservoirs over mud, sand or gravel. The nearest known population of humpback chub is in the Colorado River at Black Rocks west of Grand Junction.	Absent /No
Razorback sucker *(Xyrauchen texanus)* Endangered	The razorback sucker was once widespread throughout most of the Colorado River Basin from Wyoming to Mexico. In the upper Colorado River Basin, they are now found only in the upper Green River in Utah, the lower Yampa River in Colorado and occasionally in the Colorado River near Grand Junction. Because so few of these fish remain in the wild, biologists have been actively raising them in hatcheries in Utah and Colorado and stocking them in the Colorado River. Designated Critical Habitat for the razorback sucker includes the Colorado River and its 100-year floodplain west (downstream) from the town of Rifle.	Absent /No
BLM Sensitive Aquatic Wildlife Species		
Species	**Habitat/Range**	**Occurrence/ Potentially Impacted**
Northern leopard frog *(Rana pipiens)*	Generally found in wet meadows and in shallow lentic habitats between 3,500 to 11,000 feet. They require year-round water sources deep enough to provide ice free refugia in the winter. Within the CRVFO, this species has been documented in locales where quality riparian vegetation exists in conjunction with perennial water sources. Larger populations have been documented northwest of King Mountain within the small drainage that feeds King Mountain (Ligon) Reservoir, June Creek and East Divide Creek south of Silt, and in portions of the Rifle Creek watershed north of Rifle. The Roan Cliffs Landscape provides suitable but non occupied habitat for northern leopard frogs (BLM 2014).	Absent/No
Great Basin spadefoot toad *(Spea intermontana)*	This toad is known to occupy a wide variety of plant communities including lowlands, foothills and shortgrass plains. This species generally inhabits and breeds in seasonal pools and ponds in pinyon-juniper woodlands, sagebrush, and semi-desert shrublands, mostly below 6,000 feet.	Absent/No

Boreal toad (*Bufo boreas boreas*)	Occurs between 7,000-12,000 feet in the Southern Rocky Mountains in the vicinity of mountain lakes, ponds, meadows, and wetlands in subalpine forest (e.g., spruce, fir, lodgepole pine, aspen). Adults often feed in meadows and forest openings near water, but sometimes in drier forests. Restricted to areas with suitable breeding habitat in spruce-fir forests and alpine meadows. Breeding habitat includes lakes, marshes, ponds, and bogs with sunny exposures and quiet, shallow water. The Roan Cliffs Landscape provides suitable but non occupied habitat for boreal toads (BLM 2014).	Absent/No
Bluehead sucker (*Catostomus discobolus*) , Flannelmouth sucker (*Catostomus latipinnis), and* Roundtail chub (*Gila robusta)*	Primarily found in larger rivers, but may also be found in smaller tributaries with good connectivity to larger river systems. These fish are endemic to the Colorado River basin and reside within the mainstem Colorado River and its major tributary streams. Given their biology, feeding habits, habitat needs, and niche in the ecosystem, these species can persist in the face of actions that increase sediments to streams and rivers containing these species.	Absent /No
Mountain sucker (*Catostomus platyrhynchus*)	Found primarily in small, low- mid elevation streams in northwestern Colorado with gravel, sand or mud bottoms. They inhabit undercut banks, eddies, small pools, and areas of moderate current. Young fish prefer backwaters and eddies. Within the CRVFO, the only known occurrence is in Piceance Creek.	Absent /No
Colorado River cutthroat trout (CRCT) (*Oncorhynchus clarkii pleuriticus)*	Select streams within the action area contain Colorado River cutthroat trout - Blue Lineage. CRCT prefer clear, cool headwaters streams with coarse substrates, well-distributed pools, stable streambanks, and abundant stream cover. CRCT occur in Trapper Creek, Northwater Creek, East Fork Parachute Creek, and JQS Gulch within the action area.	Present/Yes

Six new ponds would be constructed along Cook Ridge to retain water from spring run-off resulting from snow melt and summer storms. The ponds would not be connected to fish-bearing streams. An existing water trough would also be removed and replaced with a pond. The existing water catchment would feed water to the new pond. Existing ponds would be maintained once or twice in a 10 year period.

Existing ponds within the allotment are expected to contain aquatic invertebrates, which are aquatic animals without backbones that live on the bottom of freshwater habitats during all or part of their life cycle. They are large enough to be seen with the naked eye. Major groups of macroinvertebrates include arthropods (i.e., crustaceans and insects), mollusks, sponges and nematode worms.

Colorado River Cutthroat Trout. Trapper Creek and Northwater Creek join to form East Middle Fork Parachute Creek, which ultimately flows over a large waterfall as it leaves the Roan Plateau. There are no unequivocal barriers to fish passage within these 3 drainages, so the fish in these creeks are considered one population. Research suggests that these streams contain genetically pure White-Yampa river lineage cutthroat trout. Given the geology of the area, it is likely that the streams atop the Roan plateau were historically fishless. Anecdotal evidence suggests that cutthroat trout were first stocked into these streams in the early 1900s. Behnke (1976) notes that a total of 32,000 cutthroat fry, most likely originating from Trapper's Lake,

were stocked into Northwater Creek and East Fork Parachute Creek from 1960-1971.

When assessed in 2013, East Middle Fork Parachute Creek was meeting Standards 3 and 4 for aquatic wildlife. Northwater Creek was meeting Standards 3 and 4 for aquatic wildlife below the private land parcel. Most of the private parcel and the 1.0 mile of BLM land above it were in poor condition for aquatic species. Above the degraded reach the stream has limited flow and is unlikely to harbor fish year round. Portions of Trapper Creek were meeting Standards 3 and 4, but other reaches were in fair, but improving, condition. Trapper Creek reaches not achieving standards appeared to be in an upward trend resulting from changes in livestock management. Aquatic insect assemblages were in good condition in East Middle Fork Parachute Creek and Northwater Creek. Assemblages in Trapper Creek were in fair condition with moderate departures from reference condition, but biological conditions appear to be improving. No invasive invertebrates were collected in these streams (BLM 2014).

Amphibians. The Roan Cliffs landscape provides suitable but non-occupied habitat for boreal toads and Northern leopard frogs (BLM 2014). Western chorus frogs (*Pseudacris triseriata*) occur throughout Colorado and are found primarily in wetland marshes and pond margins, also including seasonal waters, and across a wide range of elevations. Tiger salamanders (*Ambystoma tigrinum*) occur throughout Colorado near ponds, lakes, and water impoundments up to 12,000 feet in elevation (Hammerson 1999).

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Endangered Colorado River Fishes. In May 1994, the BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities in the Colorado River Basin that would impact the endangered Colorado River fish. In response to BLM's PBA the U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion (#ES/GJ-6-CO-94-F-017) on June 13, 1994, which determined that water depletions from the Colorado River Basin are likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker, and result in the destruction or adverse modification of their critical habitat.

The Biological Opinion included reasonable and prudent alternatives developed by the USFWS, which allow the BLM to authorize projects that result in minor water depletions (less than 100 acre-feet), while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The BO addressed impacts associated with a total depletion of approximately 3,000 acre-feet/year in the upper Colorado River basin. Since the BLM has not yet reached its depletion threshold, the BLM continues to abide by the reasonable and prudent alternative identified in the BO, whereby the USFWS authorized the BLM to make a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-foot depleted by each project. Payments are made to the National Fish and Wildlife Foundation to cover all BLM authorized actions that result in water depletions each year.

Colorado River Cutthroat Trout. The ponds would be constructed and maintained to improve livestock distribution. Livestock grazing would likely increase on Cook Ridge and its side

slopes, and livestock watering at Northwater and Trapper creeks would likely decrease. This could contribute to improving conditions for aquatic wildlife in the streams below Cook Ridge.

Amphibians. If amphibians are present in existing ponds, there could be short-term impacts from pond maintenance activities including heavy equipment, soil compaction, disrupted reproduction, and increased sediments in the water. However, pond maintenance would be infrequent, and pond condition should improve following maintenance. After pond construction is complete and water is available, amphibians could potentially use the new ponds and benefit from greater water availability along Cook Ridge.

No Action Alternative. No pond construction or maintenance would occur, so there would be no water depletions or potentially negative short-term impacts to amphibians. There would be no potential benefits from greater water availability along Cook Ridge. Livestock distribution would remain the same.

Analysis of Land Health Standards 3 for Aquatic Wildlife Species and 4 for Special Status Aquatic Wildlife Species.

Based on the Roan Cliffs Abbreviated Land Health Assessment (BLM 2014), Standards 3 and 4 were being met along East Middle Fork Parachute Creek and portions of Northwater and Trapper creeks. The Proposed Action is expected to improve livestock distribution, and livestock watering along these creeks should decrease. This should maintain or improve conditions for aquatic wildlife, and contribute to a gradual upward trend in conditions for streams not currently meeting Standards 3 and 4.

WILDLIFE: MIGRATORY BIRDS

Affected Environment.

The Migratory Bird Treaty Act (MBTA) provides protections to native birds, with the exception of certain upland fowl managed by state wildlife agencies for hunting. Within the context of the MBTA, migratory birds include non-migratory resident species as well as true migrants. For most migrant and resident species, nesting habitat is critical for supporting reproduction in terms of both nest sites and food. Also, because birds are generally territorial during the nesting season, their ability to access and utilize sufficient food is limited by the quality of the occupied territory. During non-breeding seasons, birds are generally non-territorial and able to feed across a larger area and wider range of habitats.

The allotment provides cover, forage, breeding, and/or nesting habitat for a variety of migratory birds that summer, winter, or migrate through the area. Migratory bird species that are federally listed and classified by the BLM as sensitive species are addressed in the Wildlife: Sensitive, Threatened, and Endangered Species section of this EA.

BLM Instruction Memorandum No. 2008-050 provides guidance toward meeting the BLM's responsibilities under the MBTA and the Executive Order 13186. The guidance directs Field Offices to promote the maintenance and improvement of habitat quantity and quality and to

avoid, reduce or mitigate adverse impacts on the habitats of migratory bird species of conservation concern to the extent feasible, and in a manner consistent with regional or statewide bird conservation priorities.

The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." The *Birds of Conservation Concern 2008* (USFWS 2008) is the most recent effort to carry out this mandate. The CRVFO is within the Southern Rockies/Colorado Plateau Bird Conservation Region 16.

The project area and areas potentially impacted by the Proposed Action include the following plant communities and potentially associated migratory bird species.

Sagebrush Shrublands. Sagebrush and the associated native perennial grasses and forbs provide food, cover, and nest sites for migratory birds. Sagebrush obligates that potentially occur in the CRVFO include the sagebrush sparrow (*Artemisiospiza nevadensis*), sage thrasher *(Oreoscoptes montanus)*, and Brewer's sparrow (*Spizella breweri*), a BCC species. Other migratory species associated with sagebrush shrublands within the CRVFO include the western kingbird (*Tyrannus verticalis*), western meadowlark (*Sturnella neglecta*), green-tailed towhee (*Pipilo chlorurus*), vesper sparrow (*Pooecetes gramineus*), and lark sparrow *(Chondestes grammacus).* Some species are associated with both pinyon-juniper woodlands and sagebrush shrublands, including the Say's phoebe and gray flycatcher.

Mixed Mountain Shrublands. The vegetation of mixed mountain shrublands varies substantially depending on elevation, slope, aspect, and soil. More mesic (moist) sites such as on north-facing slopes and along minor drainages are typically dominated by Gambel's oak and serviceberry, while more xeric (dry) sites such as south-facing slopes are typically dominated by mountain-mahogany, bitterbrush, snowberry, and sagebrush. The dense cover, tall height, and abundant acorns and berries of mesic oak-serviceberry stands provide cover, forage, and nesting habitat for numerous species including spotted towhees (*Pipilo maculatus*), Virginia's warblers (*Oreothlypis virginiae*), black-headed grosbeaks (*Pheucticus melanocephalus*), black-billed magpies (*Pica hudsonia*), broad-tailed hummingbirds (*Selasphorus platycercus*), green-tailed towhees (*Pipilo chlorurus*), mourning doves (*Zenaida macroura*), Western scrub-jays (*Aphelocoma californica*) and lazuli buntings (*Passerina amoena*).

Riparian. Riparian woodlands provide cover, feeding, and nesting habitats for a much greater number of species and individuals than adjacent vegetation communities due to the vertical and horizontal diversity of the community, the proximity to water, and typically the proximity to other vegetation communities. Forbs and insects can be more abundant in moist areas. The spring associated with the Estes Gulch proposed pond supports a small riparian area, but the associated cottonwoods are young, and the extent of the area is limited. Although used by migratory birds, this area does not provide the same cover and nesting opportunities as a larger riparian woodland with mature trees and more expansive footprint.

Raptors. Many raptors forage over wide areas, so even if they aren't known to nest in a specific area, they may still fly over searching for food. Raptors on the BCC list that occur in portions of

the CRVO include the golden eagle *(Aquila chrysaetos)*, Bald Eagle *(Haliaeetus leucocephalus)*, Ferruginous Hawk *(Buteo regalis)*, prairie falcon *(Falco mexicanus)*, peregrine falcon *(F. peregrinus)*, and flammulated owl *(Psiloscops flammeolus)*. Prairie falcons nest on rocky ledges and cliffs and hunt in grasslands and semi-desert shrublands. Peregine falcons nest on the Roan Cliffs and hunt along rivers and lakes, but can be found in nearly any open vegetation community during migration and winter. Flammulated owls typically nest in ponderosa pine and aspen forests, but have been found nesting in mixed forests, and reportedly use old-growth pinyon-juniper woodlands.

A variety of raptors not on the BCC list are known to occur in the CRVO including the American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), red-tailed hawk *(Buteo jamaicensis)*, long-eared owl (*Asio otus*), great horned owl *(Bubo virginianus)*, northern pygmy owl (*Glaucidium gnoma*), and northern saw-whet owl (*Aegolius acadius)*. The northern goshawk (*Accipiter gentilis*), a BLM sensitive species, is an occasional winter visitor to pinyon-juniper woodlands from its nesting habitat in montane and subalpine forests

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Six new ponds would be constructed along Cook Ridge, an existing water catchment would be replaced with a pond, and existing ponds would be maintained once or twice during a 10 year period. There would be approximately 3 acres of new surface disturbance. Disturbed areas around ponds would be reseeded with native seeds.

The primary factors that influence where livestock concentrate in an allotment are: 1) location of preferred water, 2) location of preferred shade, 3) prevailing wind direction, and 4) topography. As a general rule, livestock will select drinking water based on quality and accessibility (Ohlenbusch and Harner 2003). When the allotment was assessed in 2013, ridgetops and side slopes showed little evidence of livestock grazing (BLM 2014). The new ponds are expected to improve grazing distribution. Watering and grazing along Northwater and Trapper creeks should be reduced, as should the heavy grazing that has been observed on upland terraces adjacent to Northwater Creek. These upland terraces currently have more bare ground and less vegetative cover than expected. With time, the anticipated changes to grazing distribution should result in improved conditions for many migratory birds along the creeks and on adjacent upland terraces. As vegetation recovers, food (e.g., insects, forbs, grasses) and concealment for many species are expected to increase. Small mammal abundance and diversity could also increase, potentially improving the prey base for some raptors. Livestock grazing would increase on ridgetops and side slopes, which could help diversify upland vegetation age classes.

Livestock water developments can benefit migratory birds by providing water, abundant insects and forbs for food, and grasses and forbs for cover. The approximately 3 acres of new surface disturbance would be adjacent to an existing road. A small amount of migratory bird nesting habitat could be removed. Machinery, noise, and human presence could temporarily displace birds to adjacent areas until the work is complete. Potential incidental destruction of nests, eggs, and/or nestlings could occur where ponds would be constructed.

Although the vegetation removal and disturbance associated with the Proposed Action could temporarily decrease the number of some bird species in the project vicinity, migratory bird populations would not suffer significant declines, and the overall viability of species would not be affected. Long-term improvements to vegetation along Northwater and Trapper Creeks as well as on adjacent upland terraces that are currently heavily utilized would improve conditions for a variety of migratory birds. Increased grazing along Cook Ridge and its side slopes would be expected to help diversity upland vegetation classes, which would also improve conditions for some migratory birds.

No Action Alternative. Livestock distribution would not change, and upland terraces adjacent to Northwater Creek would continue to be heavily grazed. Livestock watering and grazing along Northwater and Trapper creeks would not be reduced. No new water sources would be available. No vegetation would be removed for pond construction and maintenance. Therefore no potential migratory bird nesting habitat would be removed, and birds would not be temporarily displaced due to machinery, noise, and human presence associated with the project. Livestock utilization would not increase on Cook Ridge and its side slopes.

Analysis of Land Health Standards 3 and 4 for Migratory Birds.

Based on the Roan Cliffs Abbreviated Land Health Assessment (BLM 2014), most of the assessment area was meeting Standards 3 and 4 for migratory birds. Most of the failing areas were concentrated along riparian corridors or other water sources where concentrated grazing caused localized disturbance or fragmentation. Conversely, due to lack of disturbance, upland vegetation in many areas was reaching climax seral conditions. The lack of diversity in age class and understory species can degrade habitat for some species. The Proposed Action would be expected to improve livestock grazing distribution by increasing grazing on Cook Ridge and its side slopes while decreasing grazing on upland terraces associated with Northwater Creek and decreasing watering and grazing along Northwater and Trapper creeks. Overall this should maintain or improve conditions for migratory birds, and contribute to a gradual upward trend in conditions not currently meeting Standards 3 and 4.

WILDLIFE: SENSITIVE, THREATENED, AND ENDANGERED

Affected Environment.

Table 9 summarizes Federally listed, proposed, and candidate terrestrial wildlife species (USFWS 2015) and species on the Colorado BLM State Director's Sensitive Species List (BLM 2009) that may occur in the project vicinity.

Table 9. Federally Listed, Proposed, or Candidate Terrestrial Wildlife Species.

Federally Listed, Proposed, or Candidate Terrestrial Wildlife Species		
Species and Status	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**

Canada lynx (*Lynx Canadensis)* Threatened	Canada lynx occupy high-latitude or high-elevation coniferous forests characterized by cold, snowy winters and an adequate prey base. In the western US, lynx are associated with mesic forests of lodgepole pine, subalpine fir, Engelmann spruce, and quaking aspen in the upper montane and subalpine zones, generally between 8,000 and 12,000 feet in elevation. Although snowshoe hares (*Lepus americanus*) are the preferred prey, lynx also feed on mountain cottontails (*Sylvilagus nuttallii*), pine squirrels (*Tamiasciurus hudsonicus*), and blue grouse (*Dendragapus obscurus*). The Forest Service has mapped suitable denning, winter, and other habitat for lynx within the White River and Routt National Forests. The mapped suitable habitat comprises areas known as Lynx Analysis Units (LAUs) that are the approximate size of a female's home range. Several LAUs include small parcels of BLM lands. There are no LAUs or mapped lynx habitat on the Roan Plateau.	Absent/No
Mexican spotted owl *(Strix occidentalis lucida)* Threatened	This owl nests, roosts, and hunts in mature coniferous forests in canyons and foothills. The key habitat components are old-growth forests with uneven-age stands, high canopy closure, high tree density, fallen logs and snags. The only extant populations in Colorado are in the Pikes Peak and Wet Mountain areas of south-central Colorado and the Mesa Verde area of southwestern Colorado.	Absent/No
Greater Sage-grouse (*Centrocercus urophasianus)* Candidate	Sage-grouse are found only in areas where sagebrush is abundant, providing both food and cover. Sage-grouse prefer relatively open sagebrush flats or rolling sagebrush hills. In winter, sagebrush accounts for 100% of the diet for these birds. It also provides important escape cover and protection from the elements. In late winter, males begin to concentrate on traditional strutting grounds or leks. Females arrive at the leks 1-2 weeks later. Leks can occur on a variety of land types or formations (windswept ridges, knolls, areas of flat sagebrush, flat bare openings in the sagebrush. Breeding occurs on the leks and in the adjacent sagebrush, typically from March through May. Females and their chicks remain largely dependent on forbs and insects for food well into early fall. Cook Ridge and the areas surrounding Trapper and Northwater Creeks are mapped as Preliminary General Habitat.	Possible/Yes
Yellow-billed cuckoo *(Coccyzus americanus)* Threatened	This secretive species occurs in mature riparian forests of cottonwoods and other large deciduous trees with a well-developed understory of tall riparian shrubs. Western cuckoos breed in large blocks of riparian habitats, particularly woodlands with cottonwoods (*Populus fremontii*) and willows (*Salix* sp.). A few sightings of yellow-billed cuckoo have occurred in western Colorado along the Colorado River near Grand Junction. There is no proposed critical habitat in the Colorado River Valley Field Office.	Absent/No
Colorado BLM Sensitive Terrestrial Wildlife Species Present or Potentially Present in the Project Area		
Species	**Habitat/Range Summaries**	**Occurrence/ Potentially Impacted**
Townsend's big-eared bat (*Corynorhinus townsendii*) Fringed myotis (*Myotis thysanodes)*	Occurs as scattered populations at moderate elevations on the western slope of Colorado. Habitat associations are not well defined. Both bats will forage for aerial insects over pinyon-juniper, montane conifer and semi-desert shrubland communities. Roosts in caves, rock crevices, mines, buildings and tree cavities. Both species are widely distributed and usually occur in small groups. Townsend's big-eared bats are not abundant anywhere in its range due to patchy distribution and limited availability of suitable roosting.	Possible/No

White-tailed prairie dog (*Cynomys leucurus*)	Occurs in western Colorado, typically in desert grasslands and shrub grasslands between 5,000-10,000 feet in elevation.	Absent/No
Northern goshawk (*Accipter gentilis*)	Montane and subalpine coniferous forests and aspen forests; may move to lower elevation pinyon-juniper woodlands in search of prey during winter. Preys on small-medium sized birds and mammals. Breeds in coniferous deciduous and mixed forests. Nest areas contain one or more stands of large, old trees with a dense canopy cover. No known or historic populations on the Roan Plateau. This landscape appears to provide limited suitable habitat for transient or migrating goshawks. Fledglings could temporarily use the area.	Possible/No
Ferruginous hawk (*Buteo regalis*)	Open, rolling and/or rugged terrain in grasslands and shrubsteppe communities; also grasslands and cultivated fields; nests on cliffs and rocky outcrops. Fall/ winter resident, non-breeding.	Possible/No
Bald eagle (*Haliaeetus leucocephalus*)	Nesting/Roosting: mature cottonwood forests along rivers. Foraging: fish and waterfowl along rivers and lakes; may feed on carrion, rabbits and other foods in winter. Species is protected under the MBTA and Bald and Golden Eagle Protection Act. Habitat is not documented in the project vicinity.	Possible/No
American Peregrine Falcon *(Falco peregrines anatum)*	Rare spring and fall migrant in western valleys. Peregrine falcons inhabit open spaces associated with high cliffs and bluffs overlooking rivers. The falcon nests on high cliffs and forages over nearby woodlands.	Possible/No
Greater Sage-grouse (*Centrocercus urophasianus)*	See Federally Listed, Proposed or Candidate Terrestrial Wildlife Species portion of table.	Possible/Yes
Brewer's sparrow (*Spizella berweri*)	Summers in western Colorado mountain parks and is a spring/fall migrant at lower elevations. Sagebrush obligate with an apparently secure conservation status in Colorado. Primary habitat is mature big sagebrush 1.6-3 ft. tall with low to moderate canopy cover, and habitat patches ≥15 acres. Mesic sites, particularly riparian areas within sagebrush habitats, are also an important primary habitat component.	Possible/Yes
White-faced ibis (*Plegadis chihi)*	Primarily inhabits freshwater wetlands, especially cattail (*Typha* spp.) and bulrush (*Scirpus* spp.) marshes. Rare, non-breeding, summer migrant to western Colorado valleys and mountain lakes. Feeds in flooded hay meadows, agricultural fields, and estuarine wetlands. Breeds in isolated colonies in mainly shallow marshes with "islands" of emergent vegetation.	Absent/No
Midget faded rattlesnake *(Crotalus viridis concolor)*	Found in northwestern Colorado, including western Garfield County. Sagebrush communities with an abundance of south-facing rock outcroppings and exposed canyon walls. Rocky outcrops are essential for cover, variable thermal conditions and hibernation.	Absent/No
Utah milk snake *(Lampropeltis triangulum taylori)*	In Colorado, milk snakes occur in shortgrass prairie, sandhills, shrubby hillsides, canyons and open stands of ponderosa pine in the foothills, pinyon-juniper woodlands, and arid river valleys. *L. triangulum taylori* occurs in west-central Colorado.	Absent/No

Greater Sage-grouse. The greater sage-grouse *(Centrocercus urophasianus)*, a species restricted to sagebrush rangelands in western North America, is declining across much of its range (NESRGSGWG 2004). In 2010, the USFWS added the greater sage-grouse to the ESA candidate list due to reduced habitat quality and quantity throughout its range. Greater sage-grouse on the Roan Plateau are part of the Parachute-Piceance-Roan (PPR) population, which is part of a

smaller sub-population (<200 birds) that is on the most southerly range of known greater sage-grouse habitat. Locally, the primary threat to this population is energy and mineral development, with secondary threats including livestock grazing and habitat quality (PPRGSGWG 2008).

CPW developed a greater sage-grouse GIS data set that identifies Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH) within Colorado. This data is a combination of mapped grouse occupied range, production areas, and modeled habitat (i.e., summer, winter, breeding). PPH is defined as areas of high probability of use (i.e., summer or winter, or breeding models) within a 4-mile buffer around leks that have been active within the last 10 years. Isolated areas with low activity were designated as general habitat. PGH is defined as greater sage-grouse occupied range outside of PPH. Only PGH is mapped in the Roan Cliffs Land Health Assessment area.

There are no known leks in the land health assessment area, and the area is outside of defined breeding habitat as described in the Colorado Greater Sage-Grouse Conservation Plan (CGSGSC 2008). Late summer-fall habitat is available, which would potentially include late brood rearing and transition to wintering habitats. Brood rearing activity would likely occur after broods are hatched when flight is possible. Some broods shift to more mesic areas during this time, including riparian areas and adjacent upland terraces.

Mountain shrub communities, particularly serviceberry, are more common and extensive in the PPR population than in other populations. Although this population is known to use serviceberry, a lack of disturbance has allowed mountain shrub communities to crowd out healthy sagebrush communities which are preferred habitat (CGRSSC 2008).

Although undocumented, vegetative structure may also be appropriate within the assessment area to support wintering sage grouse. The most suitable habitat in the landscape is on non-forested, south-facing slopes of relatively mild slope with sagebrush and mixed mountain shrub communities in proximity to more open riparian areas. Ridge tops capable of supporting big sagebrush are also identified as suitable habitat for greater sage-grouse on the landscape.

Special Status Bats. The Anvil Points Claystone Cave has been identified as a roost site and hibernaculum for Townsend's big-eared bats. Limited swarming behavior has been recorded at Anvil Points Mine and Claystone Caves near the cliffs and toe-slope of the Roan Cliffs. Use of the assessment area would likely be for foraging. Both bat species will forage over water and along the edge of vegetation for aerial insects. Although possible, there is no evidence of fringed myotis in the assessment area.

Brewer's Sparrow. No individuals or populations were observed during the Roan Cliffs Abbreviated Land Health Assessment (BLM 2014), but sufficient habitat is available and nesting is possible.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. Livestock water developments can benefit special status species by providing water, abundant insects and forbs for food, and grasses and forbs for cover. The new ponds

would provide water sources in a currently dry area.

Pond construction and maintenance are expected to result in improved livestock distribution. Livestock use should increase along Cook Ridge and its side slopes when water is available, thereby decreasing use along the upland terraces associated with Northwater Creek. Watering and grazing should also decrease along Northwater and Trapper creeks. Increased grazing along Cook Ridge and its side slopes could help diversify upland vegetation age classes.

The approximately 3 acres of new surface disturbance would be adjacent to an existing road. Machinery, noise, and human presence could temporarily displace special status species to adjacent areas until the work is complete. Disturbed areas around the ponds would be reseeded with native seeds, so vegetation would recover.

Greater Sage-grouse. Chick survival has been identified as a population sink, in which chicks often do not survive past the brood-rearing stage. Low chick recruitment has been indirectly attributed to overgrazing that reduces the residual herbaceous heights necessary for concealment from predation. Low herbaceous heights may also cause avoidance behavior or brood abandonment near mesic areas supporting critical forb and insect production necessary for brood development (CGSGSC 2008).

Upland terraces adjacent to Northwater Creek have more bare ground and vegetative cover than expected, likely due to concentrated livestock grazing. Existing conditions could discourage greater sage-grouse use of these areas. Pond construction and maintenance should improve livestock distribution, allowing upland terraces to recover and potentially provide brood-rearing habitat, which could potentially improve greater sage-grouse recruitment.

Increased grazing along Cook Ridge and its side slopes would likely reduce dense mountain shrub canopy cover, potentially allowing healthy sagebrush, which is preferred by greater sage-grouse, to increase.

Special Satus Bats. Special status bats could potentially forage for aerial insects over the new ponds. Potential changes to insect populations associated with changes in livestock distribution and increased water availability would likely be minor and difficult to measure.

Brewer's Sparrow. Increased livestock grazing on Cook Ridge and its side slopes could improve conditions for Brewer's sparrows by diversifying upland vegetation age classes and moderately reducing sagebrush canopy cover.

No Action Alternative. Livestock distribution would not change, and upland terraces adjacent to Northwater Creek would continue to be heavily grazed. Livestock watering and grazing along Northwater and Trapper creeks would not be reduced. No new water sources would be available. No vegetation would be removed for pond construction and maintenance. Special status species would not be temporarily displaced due to machinery, noise, and human presence associated with the project. Livestock utilization would not increase on Cook Ridge and its side slopes. Overall, dense canopy covers associated with late seral shrub communities and inadequate upland cover on streamside terraces would persist and potentially limit sage-grouse abundance.

ANALYSIS OF LAND HEALTH STANDARD 4 FOR SPECIAL STATUS TERRESTRIAL WILDLIFE. Based on the Roan Cliffs Abbreviated Land Health Assessment (BLM 2014), the assessment area was not achieving Standard 4 for greater sage-grouse. Primary conditions not conductive to sage-grouse survival included inadequate height and cover of herbaceous vegetation in riparian areas and adjacent upland terraces to provide protection from predation, lack of cover and diversity of forbs to provide optimum insect production for brood rearing, concentrated livestock grazing in potential brood rearing areas, weeds, and fences. The Proposed Action would be expected to improve livestock distribution, thereby reducing livestock grazing pressure along creeks and in adjacent upland terraces, and increasing grazing on Cook Ridge and its side slopes. These changes should improve conditions for greater sage-grouse and contribute to a gradual upward trend in some of the conditions not meeting Standard 4. Standard 4 was being met for special status bats and northern goshawks, and the Proposed Action is expected to maintain or improve conditions for these species. It is assumed that the landscape provides some suitable habitat for Brewer's sparrows, but population numbers are likely small. Increased livestock grazing on Cook Ridge and its side slopes could improve conditions for this species.

WILDLIFE: TERRESTRIAL

AFFECTED ENVIRONMENT.

Big game. Mule deer *(Odocoileus hemionus)* and Rocky Mountain elk *(Cervus elaphus nelsonii)* are recreationally important species that are common throughout suitable habitat in the region. Both species typically occupy higher elevation, forested areas during summer and migrate to lower elevation sagebrush-dominated ridges and south-facing slopes during winter. The project area is mapped as mule deer and elk summer range, an elk summer concentration area, and an elk production area.

Other Mammals. Numerous small mammals could reside within the planning area, including mice (*Peromyscus* spp.), woodrats (*Neotoma* spp.), ground squirrels *(Spermophilus* spp.*)*, chipmunks (*Neotamias* spp.), rabbits *(Sylvilagus* spp.), skunks *(Mephitis mephitis)*, raccoons *(Procyon lotor)* and porcupines (*Erethizon dorsatum*). Many of these mammals are prey for raptors and larger carnivores. Larger carnivores expected to occur include bobcats (*Lynx rufus*) and coyotes (*Canis latrans*). CPW has mapped the entire project area as mountain lion (*Felis concolor*) and black bear (*Ursus americanus*) habitat as well as a black bear fall concentration area. Mountain lions are most likely to be in the vicinity when mule deer are present. Bats documented in Northwest Colorado that could occur in the CRVFO that are not on the BLM special status species list include pallid bats (*Antrozous pallidus*), big brown bats (*Eptesicus fuscus*), spotted bats (*Euderma maculatum*), silver-haired bats (*Lasionycteris noctivagans*), hoary bats (*Lasiurus cinereus*), California myotis (*Myotis californicus*), Western small-footed myotis (*M. ciliolabrum*), long-eared myotis (*M. evotis*), little brown myotis (*M. lucifugus*), long-legged myotis (*Myotis volans*), Yuma myotis (*M. yumanensis*), big free-tailed bats (*Nyctinomops macrotis*), canyon bats (*Parastrellus hesperus*), and Brazilian free-tailed bats (*Tadarida brasiliensis*).

Gallinaceous Birds. Game birds commonly found in the project area include dusky grouse (*Dendragapus obscurus*), ring-necked pheasant (*Phasianus colchicus*) and wild turkey (*Meleagris gallopavo*). The project area is mapped as turkey overall range, but not as a production area, roost site, winter range or winter concentration area.

Waterfowl. Species including Canada geese (*Branta canadensis*) and mallards (*Anas platyrhynchos*) may occasionally migrate across the Roan Cliffs landscape, but no waterfowl are known to reside or nest in the area.

Reptiles. Reptile species most likely to occur in the project area include sagebrush lizards (*Sceloporus graciosus*), prairie and plateau lizards (*S. undulatus*), tree lizards (*Urosaurus ornatus*), gopher snakes or bullsnakes (*Pituophis catenifer*), and western terrestrial garter snakes (*Thamnophis elegans*). Gopher snakes can be found throughout Colorado in most plant communities, including riparian areas, semidesert and mountain shrublands, pinyon-juniper woodlands, and ponderosa pine and other montane woodlands. Western terrestrial garter snakes occur throughout most of western Colorado, usually below 11,000 feet. Smooth green snakes (*Opheodrys vernalis*) can be present in riparian areas, but in western Colorado, may also be common in mountain shrublands far from water (Hammerson 1999).

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. New ponds would benefit terrestrial wildlife by holding more water for longer periods of time than what is currently available along Cook Ridge. New water sources would be available and likely used by a wide variety of wildlife, and bats could forage for aerial insects over the new ponds. Terrestrial wildlife would also benefit from improved livestock distribution. With time, vegetative conditions should improve on upland terraces adjacent to Northwater Creek and in the riparian areas associated with Trapper and Northwater creeks. This could benefit small mammals, big game, gallinaceous birds, and reptiles. Increased livestock use of Cook Ridge and its side slopes could help diversify upland vegetation age classes, which could improve forage conditions for big game.

Construction and maintenance activities would remove approximately 3 acres of upland vegetation adjacent to an existing road. Machinery, noise, and human presence could temporarily displace terrestrial wildlife while the work is being implemented. Disturbed areas around the ponds would be reseeded with native seeds, so vegetation would recover.

No Action Alternative. No new water sources would be available. Livestock distribution would not change, and upland terraces adjacent to Northwater Creek would continue to be heavily grazed. Livestock watering and grazing along Northwater and Trapper creeks would not be reduced. No vegetation would be removed for pond construction and maintenance. Terrestrial wildlife would not be temporarily displaced due to machinery, noise, and human presence associated with the project. Livestock utilization would not increase on Cook Ridge and its side slopes.

ANALYSIS OF LAND HEALTH STANDARD 3 FOR TERRESTRIAL WILDLIFE

Based on the Roan Cliffs Abbreviated Land Health Assessment (BLM 2014), overall the assessment area was meeting Standard 3 for terrestrial wildlife. Areas not meeting Standard 3 for healthy plant communities included upland terraces adjacent to streams and riparian areas. Implementation of the Proposed Action is expected to improve livestock distribution by relieving grazing pressure in riparian areas and adjacent upland terraces and increasing use on upland slopes. This should maintain or improve vegetative conditions in the allotment and gradually move towards achieving Standard 3 for healthy plant communities. Because wildlife are closely tied to the quality of their habitats, wildlife benefit from healthy plant communities. The Proposed Action would maintain the achievement of Standard 3 for terrestrial wildlife.

VISUAL RESOURCES

AFFECTED ENVIRONMENT.

Lands administered by BLM CRVFO are classified as Visual Resource Management (VRM) Class III in the project area. The objective for VRM Class III is defined in the BLM's Manual H-8410-1 Visual Resource Inventory (BLM 1986), are described below.

VRM Class III – The objective is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Roan Plateau area contains variety of landscape character types and varying degrees of alteration from human activities, including range imporvements such as stock ponds. It is characterized by long, narrow ridges that run east to west and are incised by large drainages that run parallel to the ridges. Based on the Visual Resource Inventory (VRI), the Sensitivity Level of this area is moderate, the distance zones are background, the scenic quality rating units are C, and the VRI class is 4.

ENVIRONMENTAL CONSEQUENCES.

Proposed Action. The Proposed Action would make weak/minor contrasts to the existing landscapes form, line, color and texture. While some minor short term contrasts (form, color) would be introduced into the landscape with the ponds, the effects will be localized and would be viewed for a relatively small period of time. In addition, the new ponds will fit the character of the existing stock ponds and roads. No new contrast would be introduced or long term impacts. Therefore the Proposed Action meets the objective of VRM Class III in partially retaining the existing landscape character.

No Action Alternative. No Action Alternative: The existing landscape would be maintained and VRM objectives would be met.

CUMULATIVE EFFECTS.

Wildlife (including special status species). The area covered by the Proposed Action only comprises a small portion of the watershed. Many other land use activities (e.g. recreation, road maintenance, oil and gas development) occur within the watershed. All of these activities have altered the amount of suitable and potentially suitable habitats for terrestrial wildlife species. Cumulatively, many of the future actions planned on private and other lands may have some undetermined effect on wildlife including special status species habitat. The Proposed Action would create negligible landscape-level cumulative impacts to wildlife when viewed in comparison with those activities currently occurring and reasonably certain to occur on adjacent private/other lands.

Soil and Water. Cumulative impacts to soil and water resources can occur from existing roads and trails throughout the project area. Roads and trails can contribute to increased surface runoff and accelerated erosion, especially where proper drainage is lacking. Other impacts such as vegetation treatments or weed treatments may also change water infiltration or runoff rates and affect soil and water resources. Based on limited land management activities occurring across the project area, it is assumed that cumulative effects to soil and water are minor if proper best management practices are implemented.

CONSULTATION. The following stakeholders were contacted:

- Southern Ute Indian Tribe
- Ute Mountain Ute Tribe
- Uinta and Ouray Agency Ute Indian Tribe
- Grazing permittees

LIST OF PREPARERS. Members of the CRVFO Interdisciplinary Team who participated in the impact analysis of the Proposed Action and alternatives, development of appropriate mitigation measures, and preparation of this EA are listed in Table 7, along with their areas of responsibility.

Table 10. BLM Interdisciplinary Team Authors and Reviewers.

Name	Title	Areas of Participation
Isaac Pittman	Rangeland Management Specialist	NEPA lead, Range
Carla DeYoung	Ecologist	Areas of Critical Environmental Concern; Vegetation; T/E/S Plants; Wetlands & Riparian Zones, Land Heath Standards
Greg Wolfgang	Outdoor Recreation Planner	VRM, Travel Management
Kimberly Leitzinger	Outdoor Recreation Planner	Wild and Scenic Rivers, Wilderness, Recreation

Name	Title	Areas of Participation
Erin Leifeld	Archaeologist	Cultural Resources and Native American Concerns
Hilary Boyd	Wildlife Biologist	Aquatic Wildlife and T/E/S, Migratory Birds, Terrestrial Wildlife and T/E/S
Pauline Adams	Hydrologist	Air Quality, Water Quality, Soils, Geology
Kristy Wallner	Rangeland Management Specialist	Invasive, Non-Native Species (Noxious Weeds)

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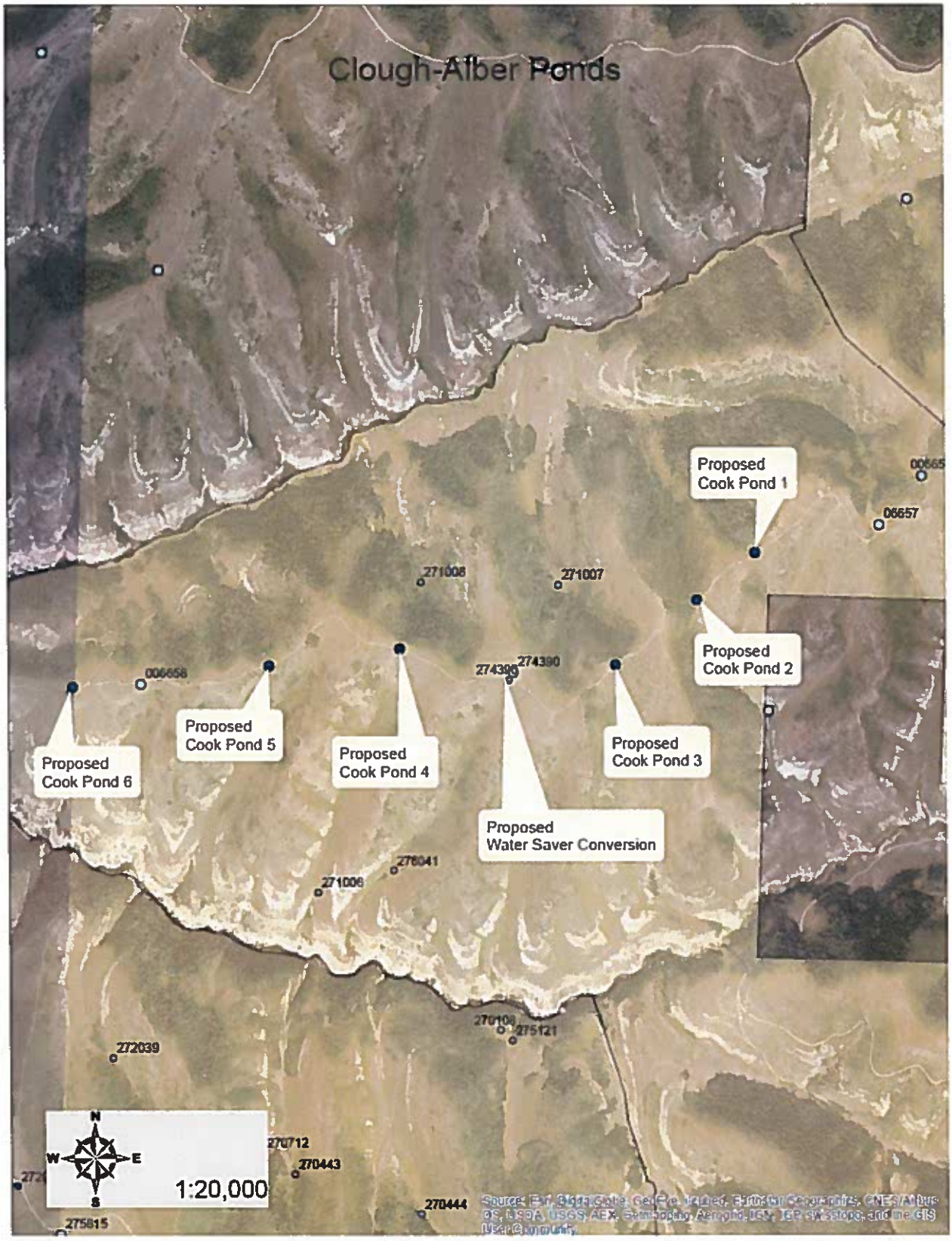
Appendix 1


Clough-Alber Ponds
Proposed Cook Pond 1
Proposed Cook Pond 2
Proposed Cook Pond 3
Proposed Cook Pond 4
Proposed Cook Pond 5
Proposed Cook Pond 6
Proposed Water Saver Conversion
006658
06657
271008
271007
274390
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Appendix 2

02291
WORK DATA SHEET

for

SECTION 02291 - MINOR EARTH DAMS AND PITS

1. Pit depth in ft 4 to 6 ft
2. Pit length in ft (L): 10 to 15 ft
3. Pit width in ft (W): 10 to 15 ft
4. End slope: 2:1
5. Side slope: 3:1
6. Embankment shape: U
7. Distance between pit and berm (A): None
8. Dam height in ft: 5 to 8 ft
9. Crest width: 12 ft
10. Crest length: 70 to 150 ft
11. Downstream slope (D.S.): 2:1
12. Upstream slope (U.S.): 2.5:1
13. Cut spillway width: 6 to 8 ft
14. Cut spillway side slope: 1:1
15. Cut spillway depth: 2 to 3 ft
16. Natural spillway depth: 2 to 3 ft
17. Depth of cut off trench (core): 2 to 4 ft
18. Borrow area side slope: 1:1
19. Borrow area end slope: 3:1

PART l: GENERAL

1.01 SUMMARY:

A. Section Includes: Clearing, grubbing, excavation, embankment development, and core trenching for construction of minor earth dams and water-retention pits.

B. Related Sections: N/A

1.02 DEFINITIONS:

A. Common Excavation: Materials to be removed from excavation, except igneous, metamorphic and sedimentary rock which cannot be excavated without blasting, will be considered common excavation. When ripping is required, the material will also be considered common excavation. Material which cannot be ripped with a rear-mounted, heavy duty, single-tooth, ripping attachment mounted on a crawler tractor having a power rating of at least 195 net flywheel hp shall be considered rock.

PART 2: PRODUCTS

2.01 MATERIALS:

A. General: See definitions.

B. Embankment: Excavated materials shall be placed in the embankment. Pervious materials, such as sand and gravel, shall be placed above the high water level.

PART 3: EXECUTION

3.01 PREPARATION:

A. Clearing and Grubbing: The surface area to be covered by embankments, surface of borrow areas and cut spillways shall be thoroughly cleared and stripped of vegetative matter, brush, trees, stumps, roots, loose rocks, and other objectionable materials, including sand, gravel, silt, and debris in channels within the foundation areas.

B. Conservation of Topsoil: Suitable material removed in conjunction with clearing, grubbing, bank sloping, and borrow area preparation shall be conserved in neat stockpiles at locations designated by the Contracting Officer.

C. Depth of Stripping: Normal stripping depth is not expected to exceed 6 inches, although variations may be encountered. The Contractor shall conserve available topsoil.

3.02 INSTALLATION:

A. Placement of Topsoil: After construction of the embankment and excavation areas is completed, the stockpiled topsoil shall be uniformly placed over cut and fill areas above high water line with priority to the top and upstream slopes of reservoirs, spillways, and borrow pits. Spreading of topsoil shall not be done when the ground or topsoil is frozen, or excessively wet. Topsoil shall be spread to depths as shown on the plans or designated by the Contracting Officer.

B. Excavation: Additional excavation for the convenience of the Contractor, or due to careless operations, including the cost of backfilling, shall be at the expense of the Contractor. The Contractor shall use care not to disturb sod or vegetation in natural spillways or sodded watercourse areas below excavated spillways. Further requirements are:

1. End and side slopes of the borrow excavation shall be as shown on the Work Data Sheet. The dimensions of excavation shall be as shown on the drawings and the Work Data Sheet.

2. Suitable materials from excavations for specified permanent construction shall be used in the embankment and shall either be placed in the embankment directly from excavation or shall be placed in temporary stockpiles and later placed in the embankment as approved by the Contracting Officer.

3. Excavated materials which are unsuitable for, or are in excess of the requirements, for the embankment or other earthwork, as determined by the Contracting Officer, shall be deposited as waste. The material shall be placed immediately below the downstream toe of the embankment in a manner that shall not leave windrows. Compaction of such waste materials shall not be required. Costs of placing material in temporary stockpiles shall be included in the unit price for common excavation.

4. Core trenches, where required, shall be excavated and suitable materials, as determined by the Contracting Officer, shall be placed in the embankment. Material determined not suitable shall be wasted at the downstream toe of the embankment in a manner that will not leave windrows.

E. Embankment: The embankment shall be constructed downstream from the borrow excavation, as shown on the drawings. Embankment materials shall be free of sod, roots, brush, snow, other waste matter and rocks of a shape or size that will interfere with uniform placement of materials in layers of specified thickness. Fill materials shall not be placed when either materials, or surface on which they will be placed, are frozen or too wet for satisfactory compaction as determined by the Contracting Officer. The scarified surface shall be compacted with the first layer of earthfill. Further requirements are:

1. Materials shall be placed parallel to the axis of the embankment in even, continuous, horizontal layers not more than 8 inches in thickness as deposited by scrapers. The full cross section of the fill shall be maintained as each successive layer is placed.

2. Successive loads of material shall be dumped on earthfill so as to produce an optimum distribution of material, subject to approval of the Contracting Officer. Distribution and gradation of materials throughout earthfill shall be free from lenses, pockets, streaks, or layers of material differing substantially in texture or gradation from surrounding material. Combined excavation and placement operations shall be such that materials, when compacted in the embankment, shall be blended sufficiently to secure the optimum compaction and stability.

3. Slopes of embankments shall be finished to conform to lines and grades shown on the Work Data Sheet. The top of the embankment shall be constructed level.

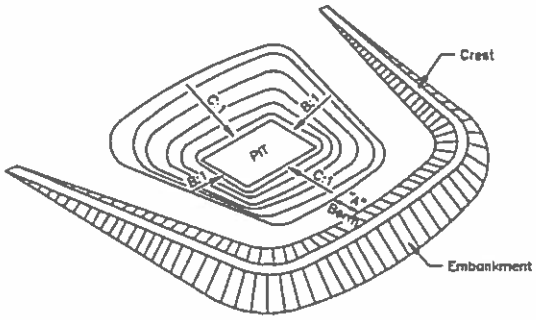
4. Core trenches, where required, shall be backfilled with material excavated from the pit, spillway, or borrow area, with its suitability determined by the Contracting Officer.

3.03 FIELD QUALITY CONTROL:

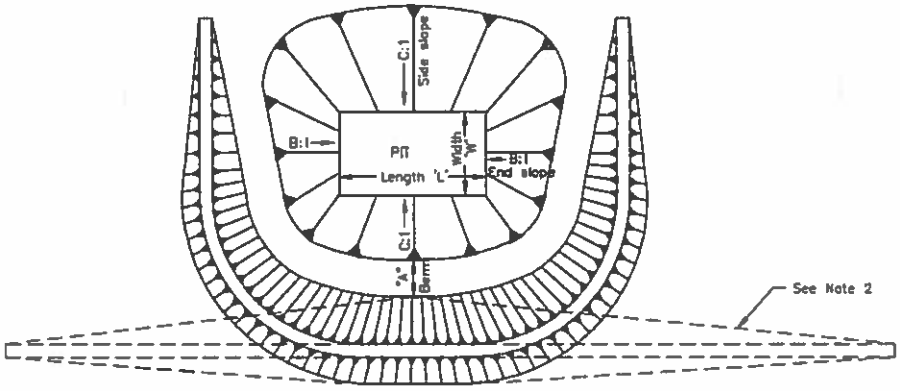
A. Core Trenches: During backfill operations, the Contractor shall operate hauling equipment evenly over the full width of the excavated core trench to obtain maximum compaction.

B. Embankment: The Contractor shall route hauling equipment over the layers of embankment material already in place, and shall distribute travel evenly over the entire width of the embankment to obtain maximum compaction while placing material. Overcompaction shall be avoided along hauling route.

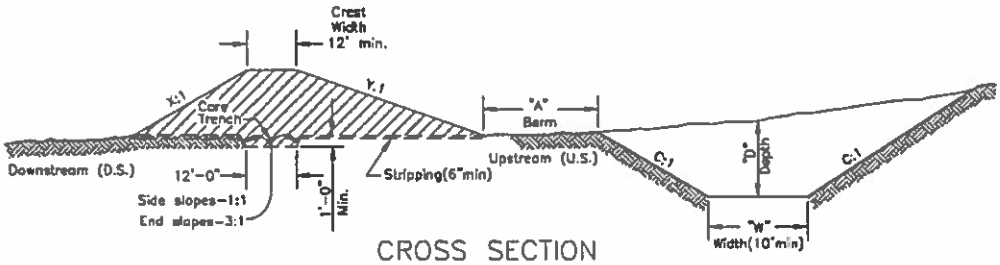
END OF SECTION



PERSPECTIVE VIEW



PLAN



CROSS SECTION

NOTES:

1. Pit and embankment slopes and dimensions shall be as shown on the Work Data Sheet or as staked.
2. Embankment may be "U", "L", "I", or straight line shape. Construct as indicated in specifications or as staked.

ALWAYS THINK SAFETY

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
DIVISION OF TECHNICAL SERVICES SERVICE CENTER

TYPICAL
WATER RETENTION PIT

DESIGNED by others
REVIEWED
APPROVED

DRAWN	SCALE NONE
DATE AUGUST 5, 1990	SHEET OF
DRAWING NO. 02291-1	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
COLORADO RIVER VALLEY FIELD OFFICE
SILT, COLORADO

FINDING OF NO SIGNIFICANT IMPACT

DOI-BLM-CO-N040-2015-0016-EA

FINDING OF NO SIGNIFICANT IMPACT.

The environmental assessment, analyzing the environmental effects of the Proposed Action, has been reviewed. The Proposed Action with the attached mitigation measures result in a finding of no significant impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the Proposed Action.

DECISION RECORD.

It is my decision to approve the proposal submitted and implemented by the grazing permittee on the Clough-Alber Allotment. This decision will facilitate a rotational grazing system that will help in achieving land health standards by giving proper rest and recovery time during the grazing season and improve livestock distribution.

RATIONALE.

1. The construction of the 6 additional ponds will allow for better control and distribution of sheep. The development of these additional ponds will aid in a rotational grazing system that will allow for periodic rest from grazing pressure and help to achieve land health standards and guidelines. The conversion of the water saver water trough into a pond will be a safer and more reliable source of water for sheep.

2. The environmental impacts have been mitigated with measures included in the Cooperative Range Improvement Permit.

MITIGATION MEASURES.

1. Cultural Resource Stipulation. If subsurface cultural values are uncovered during operations, all work in the vicinity of the resource will cease and the authorized officer with the BLM notified immediately. The operator shall take any additional measures requested by the BLM to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within 48 hours of the discovery, the State Historic Preservation Officer (SHPO) and consulting parties will be notified of the discovery and consultation will begin to determine an appropriate mitigation measure. BLM in cooperation with the operator will ensure that the discovery is protected from further disturbance until mitigation is completed.

Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer.

2. Native American Human Remains Stipulation. Pursuant to 43 CFR 10.4(g), the holder must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on federal land. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery that could adversely affect the discovery. The holder shall make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the authorized officer, or until the authorized officer has issued a written notice to proceed, whichever occurs first.

3. Paleontological Stipulation. Any paleontological resource (historic or prehistoric site or object) discovered by the operator, or any person working on their behalf, on public or Federal land shall be immediately reported to the authorized officer. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant scientific values.

4. To reduce the opportunities for weeds to become established and to reduce the opportunities for offsite sediment transport, the disturbed areas will be reseeded with a certified weed-seed free mixture of native grasses adapted to the site. The permittee will monitor the disturbance to detect the presence of any noxious weeds and will be responsible for promptly controlling any noxious weeds on the Colorado State List A or B (except redstem filaree) within the area disturbed from construction. If the permittee chooses to use herbicides as the control method on public lands, a Pesticide Use Proposal shall be submitted to the BLM and approved prior to initiating any herbicide spraying. The operator is to ensure equipment involved in land disturbing actions be clean of noxious weed seeds or propagative parts prior to entry on site. When working in areas with noxious weeds, equipment should be cleaned prior to moving off site.

NAME OF PREPARER. Isaac Pittman, Rangeland Management Specialist

SIGNATURE OF AUTHORIZING OFFICIAL.

B. R Hop — 7-15-15

Brian R. Hopkins
Assistant Field Manager
Colorado River Valley Field Office

Date